

REMARKS

Claims 11-12 remain in the instant application, and claims 10 and 13-16 are canceled. Claim 11 was amended to clarify the invention, with supporting disclosure therefor found throughout the specification and drawings of the instant application. No new matter has been added.

Attached herewith is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Also attached herewith is a "**Clean Copy**" of remaining claims 11-12.

As requested by the Examiner, claims 10 and 13-16 are canceled as non-elected claims in response to the restriction requirement.


Submitted herewith is a new Declaration to comply with the Examiner's objection for a defective Oath or Declaration. The body of the new Declaration includes a reference to the filing of the provisional application having U.S. Serial No. 60/065,498 filed on November 19, 1997, upon which applicants claim domestic priority under 35 U.S.C. § 119(e). Hence, this objection is now rendered moot.

The Examiner rejected claims 11-12 under 35 U.S.C. § 102(e) as anticipated by Sheinman. Applicants have amended claim 11 such that this rejection should be obviated. In

particular, the instant revised claim states that the spin vanes are located "substantially at the mid-point of the upper and lower end of the continuous side wall." This language patentably distinguishes the location of applicants' vanes from those disclosed in the Sheinman patent. Again, applicants kindly emphasize that the Sheinman patent clearly shows vanes **12** located below the midpoint of the cylindrical shell **4**, as illustrated in Figs. 1 and 2 therein.

In view of the foregoing comments and amendments, applicants believe the case is now in condition for allowance and respectfully request the Examiner to pass the case to issue at an early date.

Respectfully submitted,


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☒ Pursuant to 37 CFR 1.34(a)

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:



Claim 11 has been amended as follows:

11. (Amended) A cyclonic device suitable for use in the contacting of vapor and liquid in a distillation or fractionation process comprising:
- (a) a floor;
 - (b) a continuous side wall having an inner surface, an outer surface, an upper end and a lower end, the lower end terminating into the floor, the upper end defining an upper cyclonic region, and the side wall defining a contacting volume above the floor and below the upper cyclonic region;
 - (c) at least one vapor opening in the floor for introduction of vapors into the contacting volume;
 - (d) at least one liquid downcomer positioned within the continuous side wall, the downcomer having:
 - (1) a side wall having an upper portion and a lower portion, the upper portion being located in the upper cyclonic region, and the lower portion extending to a point above the cyclone floor; and
 - (2) at least one downcomer port located proximate to the lower portion end of the downcomer, the port defining an opening in downcomer for introduction of liquid above the floor into the contacting volume;
 - (e) a plurality of liquid outlets located on the continuous side wall; and

- (f) at least two spin vanes located between the continuous side wall and the downcomer side wall substantially at [about] the mid-point of the upper and lower end of the continuous side wall.

Claims 10 and 13-16 have been canceled.